Amendment to the Specification

Please replace the paragraph beginning on pg. 1, line 3, with the following rewritten paragraph.

This application is related to the following copending U.S. Patent Applications, all filed on even date herewith: Serial No. 09/660,958 entitled "Hierarchical Organization of Directory Entries within Electronic Communication Devices" by Smith, Jr. et al., Serial No. 09/660,957 entitled "Establishment of Expiration Criteria within Directories of Electronic Communication Devices" by Smith, Jr. et al., Serial No. 09/661,454 entitled "Method and System for Transferring and Receiving Directory Information to and from Electronic Communication Devices" by Smith, Jr. et al., Serial No. 09/661,455 entitled "Automatic Transfer of Electronic Directory Entries from Directory Assistance Service to a Directory within an Electronic Communication Device" by Smith, Jr. et al., and Serial No. 09/660,982 entitled "Method and System for Updating Directory Entries within Electronic Communication Devices by Accessing an Electronic Database" by Smith, Jr. et al.

Please replace the paragraph beginning on pg. 6, line 3, with the following rewritten paragraph.

The problems outlined above are in large part addressed by a system and method for organizing and managing directory entries within electronic communication devices. Electronic communication devices may include, but are not limited to telephones, facsimile machines or electronic organizers. As storage capacity of electronic devices increases and more devices are created that require telephone numbers for product use (i.e., telephones, facsimiles, pagers, etc.), there becomes a need to expand the complexity of organizational structures and directory management systems within directories of electronic communication devices. The most simplified directory management structure within electronic organizational devices is one that contains individual records, commonly called entries, without the categorization of multiple entries. More advanced structures organize entries into groups. An entry may comprise ~~of~~ a variety of information (i.e., a person's name, telephone number, address, etc.), which may be defined as entities. Often entries share a common entity or theme and may be placed in a category defined by that commonality, thus creating a more complex directory management structure. However, current electronic communication device applications limit the categorical management of directory entries to be of a single layer structure. As such, a category cannot have categories within itself, inhibiting the organization of a plurality of entries within an individual category. This simplified structure usually restricts the organization of the entries even further by requiring that all entries be classified into a category. Consequently, the user may place an entry into a category that does not fit into the

commonality of the other entries within the category, making it more difficult to locate the entry at a later date. Another restriction often encountered in current electronic communication devices is only allowing an individual directory entry to be contained within one category. For example, a directory entry of a family member or co-worker may fit into multiple categories (i.e., family, work, softball team, etc.). With this single category limitation, the directory entry of the family member may only be located in one category, restricting the efficient use of the directory.

Please replace the paragraph beginning on pg. 10, line 13, with the following rewritten paragraph.

As noted above, devices may include transmitting capability between multiple devices. This is particularly advantageous for transferring and receiving multiple directory entries. For example, a person who changes jobs within a company may want to move a plurality of directory entries pertaining to a particular project from her directory to the directory of the person taking ~~the~~ her old job. Another example may have an individual copy his set of directory entries pertaining to his family members to a directory of a device of another family member. The organizational structure of the method as described herein may offer a manner in which to transfer and receive directory entries from one device to another. Once the entries have been selected, the user enters a destination telephone number and the destination device receives the transfer request. The directory system of a device that can receive and transfer directory entries can be of a similar structure of the device described above. In addition to the inclusion of a processor, storage medium, and output controller, a transitory medium exists to enable the transfer and receipt of entries. The transmitting capability also offers communication between a device and a database. For example, directory assistance is a database that is commonly used by customers of a telephone service provider. Other databases include a directory system within a computer network or a simple list of directory information. In the embodiments of accessing a database, the transfer of the entries is only in the direction of the database to the device by utilization of a destination telephone number. Alternatively, the directory entry may be downloaded to the device which activated the database, instead of entering in a destination telephone number. Alternatively, the entry may already exist in the directory of the device. Therefore, the program instructions executable by the processor initiate a search of all of the directory entries within the second device to search for any matching entry content values and then asks the user if the two entries are the same. If the user selects that they are the same, the processor executes program instructions to update the rest of the entry content values with the transferred entry.

Please replace the paragraph beginning on pg. 14, line 2, with the following rewritten paragraph.

Fig. 9 is a flow diagram illustrating the process of moving directory entries from a directory to a ~~purge file~~delete set based on established expiration criteria;

Please replace the paragraph beginning on pg. 14, line 5, with the following rewritten paragraph.

Fig. 10 is a flow diagram illustrating the process of removing expired directory entries from a ~~purge file~~delete set;

Please replace the paragraph beginning on pg. 15, line 3, with the following rewritten paragraph.

Turning now to the drawings, Fig. 1 illustrates an example of a multi-level organizational data structure. Directory 20 is a directory contained within an electronic communications device, which may include, but is not limited to telephones, facsimile machines, or electronic organizers. Directory entries 26 within directory 20 are organized using sets 22 and subsets 24. A set is defined as including at least one subset or at least one entry; and a subset is defined as including at least one entry. As indicated in Fig. 1, the first layer below directory 20 may include one or more sets 22 (i.e., Set 1 and Set 2) and directories entries 26 (i.e., Entry 3a, Entry 3b and Entry 3c). Alternatively, the first layer may not include any directory entries 26. The second layer below directory 20 may include one or more subsets 24 (i.e., Subset 1A and Subset 1B) or directory entries 26 (i.e., Entry 2a and Entry 2b). Additional layers may be formed as well. For example, Subset 1AA, Entry 1Ba, Entry 3a and Entry ~~1Aaa~~ 1AAa makeup the 3rd and 4th layers of directory 20 in Figure 1. In the embodiment of Fig. 1, directory 20 contains 4 layers, but the device as described herein is not limited by the number of layers that a directory can contain. In fact, the design of the case cited herein ultimately allows the number of layers created within the directory to be left to the discretion of the user or the capacity of the device. In addition, the multi-level organizational data structure of the device as described herein may also comprise a directory entry in multiple sets or subsets. For example, Entry 3a of directory 20 is located in two locations, once within Subset 1B and the other in the 1st layer of directory 20.

Please replace the paragraph beginning on pg. 15, line 24, with the following rewritten paragraph.

Some embodiments of the systems and methods described herein include an organization of directory entries within sets and subsets. A group of entries may be designated as either a set or subset, depending on the point of reference ~~using~~ used in describing the group. For example, a set as used herein includes at least one subset or at least one entry. However, the directory itself may be viewed as a set since it belongs to a plurality of features contained within an electronic communications device. In this interpretation, the directory entries are organized into the directory set and further organized into subsets created within the directory set, including subsets within a multi-level organizational data structure. Thus, the directory set may contain multiple subsets. For example, directory 20 of Fig. 1 may be considered a set and sets 22 may be considered subsets along with subsets 24 created within them. Alternatively, such an organization may be viewed as multiple sets and subsets within the directory. A set could be viewed as a subset within the directory set or a set of one or more subsets. For example, Set 1 of Fig. 1 could be designated as Subset 1 of the Directory; while Subset 1A could be designated as a subset to Set 1. Set 1 and Subset 1 in this example thereby would be the same. Although the embodiment of Fig. 1 does not designate directory 20 as a set, such an interpretation may be used in all embodiments described herein.

Please replace the paragraph beginning on pg. 17, line 4, with the following rewritten paragraph.

Turning now to Fig. 3, a flowchart is shown to illustrate the steps of selecting a directory entry, subset or set for further processing by a management command. It also shows how to present the entry content values associated with a selected directory entry to a user of an electronic communications device in which a directory is placed. Hereinafter, a device is defined as an electronic communications device in which a directory is placed and user will be defined as a person using a device. The process is started at step 60 of Fig. 3. Step 60 may be executed by a start command activated by the user or it may always be enabled, allowing the user to access the process at any time. More specifically, the task of simply supplying power to a device containing the cited directory system may activate step 60. Interconnects A and I at steps 95 and 280, respectively, join step 60 and are explained in further accompanying figures. The next step is process step 62 in which set, subset and entry identifiers are presented to the user. This first presentation is typically the identifiers corresponding to the sets and directory entries of the first layer of the directory organization data structure. For example, the layer in which Set 1, Set 2, Entry 3a, Entry 3b and Entry 3c consist in Fig. 1 would be presented. Alternatively, the presented layer of set, subset and entry identifiers may be of a different layer than of the first layer of the organizational data structure. This option may be preprogrammed by the

user in order to increase the efficiency of the device. The identifiers may be presented in a variety of manners, including displaying characters on a display screen of the device or providing audible ~~communication~~output. Step 64 follows by receiving a selection of one or more of the presented set, subset or entry identifiers. The user of the device may make the selection by a variety of means, including using vocal commands, activating a device actuator, or supplying a pre-assigned dual tone multi-frequency (DTMF) tone. Either of the latter two options may utilize a screen on which the identifiers may be displayed and highlighted by the selection device.

Please replace the paragraph beginning on pg. 20, line 11, with the following rewritten paragraph.

If the management command executed is not an add command, the directory management program continues to step 120 to determine if the command was a delete command. In the event that a delete command was executed, the program recognizes in step 122 if one or more entry, subset, or set identifiers have been received. If the routing process started with step 100 directly following step 60 as is indicated as one option in Fig. 4, one or more identifiers still need to be selected for deletion. This process is completed through interconnect A at step 95. Interconnect A returns to subsequent step 62 as shown in Fig. 3. When an individual or group of entries, subset or sets have been selected, the program route returns back through interconnect C at step 90, since a management command has already been executed. Interconnect C returns to subsequent step 110, which leads to step ~~124~~ 120 through 122. If the user started the management process by selecting one or more directory entries, subsets or sets through the process presented in Fig. 3, then step 124 would automatically follow step 122 without using interconnect A through step 95. Step 124 presents a prompt essentially asking the user to confirm or reject the removal of the directory entries, subset or sets associated with the selected identifiers. Subsequent step 126 either receives a confirmation command or rejection command from the user. The directory management program offers two process routes at step 128, depending on which command was received in step 126. In the event that the user decides not to remove the entries, subset or sets associated with the selected identifiers, a rejection command is received in step 126 and the process is returned to receive an alternate management command through interconnect B of step 70. In this case, the selected identifiers remain intact, so that the user may continue the management of the selection. In the event that the user continues with the process of removing the entries, subsets or sets associated with the selected identifiers, a confirmation command is subsequently recognized by the directory management program in step 128. Then, step 129 follows to remove the entry content values and entry identifiers associated with the selected entries, subset, or sets. The removal process may either delete the entry or move it to a delete set, wherein the user may subsequently delete the file ~~form~~ from the directory. Either option may

be preprogrammed into the device or preselected by the user. The process is completed with a termination of step 80.

Please replace the paragraph beginning on pg. 21, line 12, with the following rewritten paragraph.

Turning now to Fig. 5, interconnect D at step 130 continues the process of managing directory entries, subsets and sets associated with selected identifiers if an add or delete command was not executed in Fig. 4. Step 140 follows step 130 to determine if an edit command has been executed. In the event that an edit command has been executed, step 142 follows to determine if a single entry, subset or set identifier has been received. Similar to step 122 of Fig. 4, if a single entry, subset or set identifier has not been received, the process follows step 95 of interconnect A to select ~~an~~ a directory entry, subset or set to be modified. Alternatively, multiple identifiers may be selected. The edit process would then enable the user to modify an entry content value associated with multiple entries. This embodiment is not shown, but is inherent to the objective of the method as described herein, which is to present a method of organizing information within a directory and offering a method to manage the information within the organized structure. In the event that a single entry, subset or set has been selected, the process leads to step 144 to present entry content values or identifiers corresponding to the selected entries, subsets, or sets. In the alternative embodiment discussed in reference to Fig. 3, this step may already be complete and thus step 144 could be skipped.

Please replace the paragraph beginning on pg. 24, line 13, with the following rewritten paragraph.

The device described herein is also adapted to receive transferred directory entries from other devices as ~~is~~ the device described herein is able to transfer entries to external devices. This process is outlined within the flowchart of Fig. 6. The entry receipt process starts with step 60 and moves to step 190, wherein one or more transferred directory entries, subsets or sets from another device are presented to the user, along with an acceptance prompt to either accept or decline the transfer of entries. Step 192 either receives an accept command or denial command. If the denial command is received, step 194 sends the program to termination step 80. If an acceptance command is received at step 192, then step 194 leads to step 196, wherein a subset or set within the directories is selected as the destination site for the transferred entries. As before, step 198 presents a prompt to the user to transfer the entries to the destination subset or set, step 200 receives either a confirmation command or rejection command, and step 202 directs the process route based on the command received in step 200. If a rejection step is received, the process is routed back to step 196 to reselect a subset or set in which to transfer the received entries. An alternative route (not shown) would enable the user to exit

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the directory management program, thus not allowing the received entries to be transferred to the directory. If a confirmation command is received at step 200, the process continues to step 186 to transfer the selected entries to the received destination. Step 188 follows by presenting a confirmation statement to the user indicating that the selected entries have been successfully transferred. Step 80 ends the process with a termination step.

Please replace the paragraph beginning on pg. 26, line 10, with the following rewritten paragraph.

An alternative option that may be incorporated into electronic devices is the establishment of expiration criteria for one or more directory entries. This feature would allow the user to establish expiration criteria for a directory entry in order to automatically remove the entry from the directory upon expiration. The expiration criteria may comprise ~~of~~ a date or time, a tag value, an access frequency value, and an area code assigned to the vicinity in which the device containing the cited directory management program is located. A tag value is defined as a descriptor or symbol, in which to place one or more entries into a group not necessarily defined within a set or subset. For example, a user may be working with several individuals from different companies on a project. The individual could enter in the project name as the tag value and then delete all entries associated with the project once the project is complete. An access frequency value references the amount of times an individual entry has been accessed in a given time period. A user may enter an access frequency value as an expiration criterion of an entry so that once the access frequency falls below that value, the entry is removed from the directory. Expiration criteria may be entered into a directory upon creation of an entry or later as a modification to the entry. This data entry may follow the process outlined in Figs. 3-5 in which directory entries are selected, added, and edited. The benefit of establishing expiration criteria allows the directory to be relatively self-maintained. Unused or expired criteria may be deleted, thus allowing more storage capacity for other information.

Please replace the paragraph beginning on pg. 28, line 16, with the following rewritten paragraph.

Turning back to step 246 of Fig. 10 wherein the device is not set to remove all of the entries within the delete set at once, step 266 follows by receiving selection of one or more entries, subsets, or sets within the delete set by the method as described in Fig. 3. A prompt is then presented to the user through step 268 to remove the directory entries associated with the selected identifiers. Step 270 receives either a confirmation or a rejection command, while step 272 determines the process route of the program by the command received. If a rejection command is received, interconnect I may then be followed through step 280 to either

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select alternative entries to be deleted from the delete set or transfer entries from the delete set back to the directory and the expiration criteria deleted or reset. In the event that a confirmation command is received in step 270, all entries associated with the selected identifiers will then be deleted in step 274. The process is completed by end step 80.

Please replace the paragraph beginning on pg. 29, line 1, with the following rewritten paragraph.

Fig. 11 presents a block diagram of directory system 400 within an electronic communications device. Input 410 activates preprogrammed commands to initiate processor 420 to execute program instructions 438 within directory management program 436. Input may include but is not limited to entry selection by the user, messages and entries sent from other electronic devices, or information downloaded from a database. The input may be activated by selecting options or commands by an actuator on the device while the information is displayed on the device screen or while the information is given in audible instructions. Input may also be activated by ~~a~~ selecting options or commands on a touch-sensitive pad or by vocal commands. The directory management program is contained within storage medium 430 of directory system 400. Storage medium 430 also includes data structure 432, which is adapted to organize directory entries into sets and subsets, as indicated in Fig. 1. Data structure 432 includes fields 434 for the storage of entry content values including set or subset identifiers associated with each directory entry. Storage medium 430 also includes tracking medium 440 for tracking information relative to the current status of the device. For example, information may include the time and date, the area code of the vicinity in which the device is located, or access frequency values for the directory entries. Other components directory system 400 may include ~~is~~ are output controller 450 and transitory medium 460. The transitory medium is adapted to remove one or more directory entries from data structure 432 of storage medium 430. Transitory medium 460 may alternatively include a delete set (not shown) in which to store expired directories. Storage medium 430 and transitory medium 460 interact with the processor to offer results to output controller 450. The output controller formats the information in a manner that may be ~~given~~ presented to the user to via output/display device 470. The display device may comprise ~~of~~ vocal instructions or visual displays on the screen of the device.

Please replace the paragraph beginning on pg. 30, line 16, with the following rewritten paragraph.

Figure 13 shows the interface communication between directory system 400 and directory system 500. Directory system 400 contains all of the same components as that of Fig. 11 and directory system 500 comprises similar components as indicated by processor 520, storage medium 530, transitory medium 550 and output controller 560. Storage medium 530 contains data structure 532 and directory management program 536 and tracking medium 540. Data structure 532 comprises fields 534 which are adapted for the storage of entry content values including identifiers of the set and subset associated with each directory entry. Directory management program 536 comprises program instructions 538 which are executable by processor 520. Each of these components interact to display information on output/display device 570. Output controller ~~24~~60 of directory system 400 may be interfaced to input 510 of directory system 500 in order to transfer directory entries, subsets or sets from directory system 400 to directory system 500. In an alternative embodiment (not shown), output controller 560 of directory system 500 may be interfaced to input 410 of directory system 400 in order to reverse the transfer of entries.